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## **Core paper**

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# **‘Fit for Registration’: A mixed methods study integrating data and theory to illuminate mentor decision making in the assessment of student competence in care settings.**

## **Background**

Practice learning and assessment is pivotal to the delivery of a competent workforce at the point of professional registration (Eraut 1994, Gallagher et al 2012, Robinson et al 2012, Windsor et al 2012). In United Kingdom undergraduate nursing programmes the role of the mentor, a registered nurse responsible for supporting and assessing the development of student competence, is key to achieving this goal (NMC 2008, Shakespeare & Webb 2008). To date few empirical studies have examined how these competence based practice assessment decisions are made despite concerns having been raised that mentors fail, or may be reticent, to judge student performance as unsatisfactory (Watson & Harris 1999, Duffy 2006, Black 2011, Jervis & Tilki 2011, Mead et al 2011, Hunt et al 2012). This phenomenon, euphemistically described as ‘failure to fail’, is also noted where faculty are involved (Luhanga et al 2008), and is not limited to nursing (Finch 2009).

This paper describes a two phase, mixed methods study to investigate the assessment of student competence using judgement and decision making theoretical frameworks. The key concepts associated with competence based assessment and decision making are first described and the study method detailed. The paper explores the contribution of judgement and decision making theory to developing an understanding of the assessment of student competence through an emerging model of mentor decision making. The findings will be used to stimulate debate regarding mentor decision making in assessment of fitness for registration which is timely given the ongoing reviews of nursing education (HEE 2014, NMC 2014).

## **Competence based assessment**

For nursing and a myriad of practice based professions, significant and increasing emphasis is placed on student achievement within competency frameworks (Watson et al 2002, NMC 2010, Gallagher et al 2012, Windsor et al 2012, Pijl-Zieber et al 2014). Such competence and the accompanying assessments are an important professional issue, not least as they act as a form of self-regulatory credentialing to structure the demonstration and maintenance of competence (Eraut 1994, Cowan et al 2005, Cowin et al 2008). This is despite the absence of a consensus on a definition of ‘competence’ (Bradshaw 2000, Redfern et al 2002, Watson et al 2002, Levett-Jones et al 2011, Lejonqvist et al 2012, Pijl-Zieber et al 2014).

One area of greater agreement in most definitions of competence places emphasis on a nurse’s ability to apply knowledge, skills attitudes and values to safe and effective patient care (Yanhua & Watson 2011, Pijl-Zieber et al 2014). There is also some agreement that competence is the ability to act in the real world whatever the conditions, through the successful integration of theory and practice (Milligan 1998, Redfern et al 2002), and a quality or state of being (Pijl-Zieber et al 2014) that supports independent, safe and effective practice (NMC 2008, Cassidy 2009). Competency on the other hand is more concerned with the actual performance and behaviour of an individual. This in nursing is reflected in standards describing the aspects of practice to be achieved during a programme by a student in order to be eligible for the award (Milligan 1998, NMC 2010). The validation of the assessment, “signing off” competencies, by a practitioner has become a widely accepted part of any practice assessment in a nursing programme, though much debate surrounds the benefits gained from, and appropriateness of reducing clinical practice to a checklist of competency standards (Gallagher et al 2012, Windsor et al 2012).

## **Decision making**

Decision making in clinical practice involves processes of judgement formation and cognitive reasoning to determine the final decision (Thompson 1999, Banning 2008, Standing 2008, Simmons 2010). Judgements arise from an assessment, evaluation or belief about a situation based on the available information, which then inform the decision; a choice between alternatives leading to a course of action (Thompson & Dowding 2002, Newell et al 2007, Hardman 2009). Information, whether gathered consciously through cue acquisition and utilization or responded to subconsciously through an intuitive, heuristic grasp of a situation, is a key element in any decision task undertaken (Standing 2008).

Reasoning strategies underpinning judgement and decision making may be formal in nature, such as decision analysis or information processing, informal in nature, adopting a heuristic or intuitive approach, or a combination of strategies, a so-called dual-processing approach (Thompson 1999, Standing 2008, Simmons 2010, Kahneman 2011, Stanovich 2011). The decision making strategies employed may be influenced by the experience of the practitioner involved, features of the situation a so-called situation awareness, and the complexity of the decision required (Hammond 1996, Standing 2008, Tower et al 2012). Heuristic use of information or selection of a decision strategy not matched to the decision task may explain inconsistency and variability noted in clinical decision making (Cioffi 1998, Hicks et al 2003, Twycross & Powls 2006, Thompson et al 2008, Dowding et al 2009, Hoffman et al 2009, Yang & Thompson 2011).

## Aim

The aim of this study was to identify individual mentor practices and the cognitive processes used by mentors to form judgements and reach an overall decision on a student's achievement at the end of an assessed practice experience.

### *Principal Research Question (PRQ):*

What factors underpin mentor judgements of student nurse competence in practice and how do mentors reach a decision to pass or fail a student in practice?

### *Supplementary Research Questions (SRQ):*

1. What evidence do mentors gather and use to inform their judgements about a student nurse's practice?
2. What effect do assessment strategies, including documentation, have on mentor judgements and decisions about a student's practice?
3. How do mentors make judgements and reach a decision to pass or fail a student in practice?

## Method

A sequential embedded mixed methods design (Creswell & Plano Clark 2011) was employed for the study.

In *phase one* student practice assessment documents (PADs) were collected from a cohort of students (n=41) completing a three year undergraduate nursing programme; and the assessment decisions extracted (n =330) to examine mentors' use and conduct of assessment processes. These data provided the sampling frame used to identify a purposive sample of final placement mentors for interview.

In *phase two* practice documentation was used as artefacts in stimulated recall interviews (Lyle 2003, Dempsey 2010, Burden 2014) with final placement mentors (n=17). Mentor comments in student PADs and data from the interviews were each analysed thematically using a six phase process (Braun & Clarke 2006).

At *integration* results of the independent quantitative and qualitative analysis strategies from Phases 1 and 2 were connected and merged. Informed by a Parallel Mixed Data Analysis technique (Teddlie & Tashakkori 2009), the two strands of data analysis (descriptive statistics from phase 1 and thematic analysis from phase 2) were brought together for further analysis.

Ethical approval (NP/0088 and NU12/10136) was obtained from all institutions involved.

## Results

Quantitative data from phase 1 provided details of the context of the study and mentor practices as well as an audit of mentor practice against programme standards. In phase 2, thematic analysis of mentor comments in the student PADs provided information predominantly about *what is* judged regarding student competency, whilst thematic analysis of the final placement mentor interviews focussed more on the *how* and *why* aspects of mentor decision making. Integrative analysis, structured around the three supplementary research questions (SRQ) of the study resulted in a descriptive and explanatory understanding, represented in a model of mentor decision making.

### **SRQ1** What evidence do mentors gather and use to inform their judgements about a student nurse's practice?

Thematic analysis revealed that mentors gather evidence about a student and their practice across a range of areas (Figure 1), which can be organised around three distinct dimensions of practice. Key to any judgement of a student is an evaluation of their ability to function as a reliable member of the team.

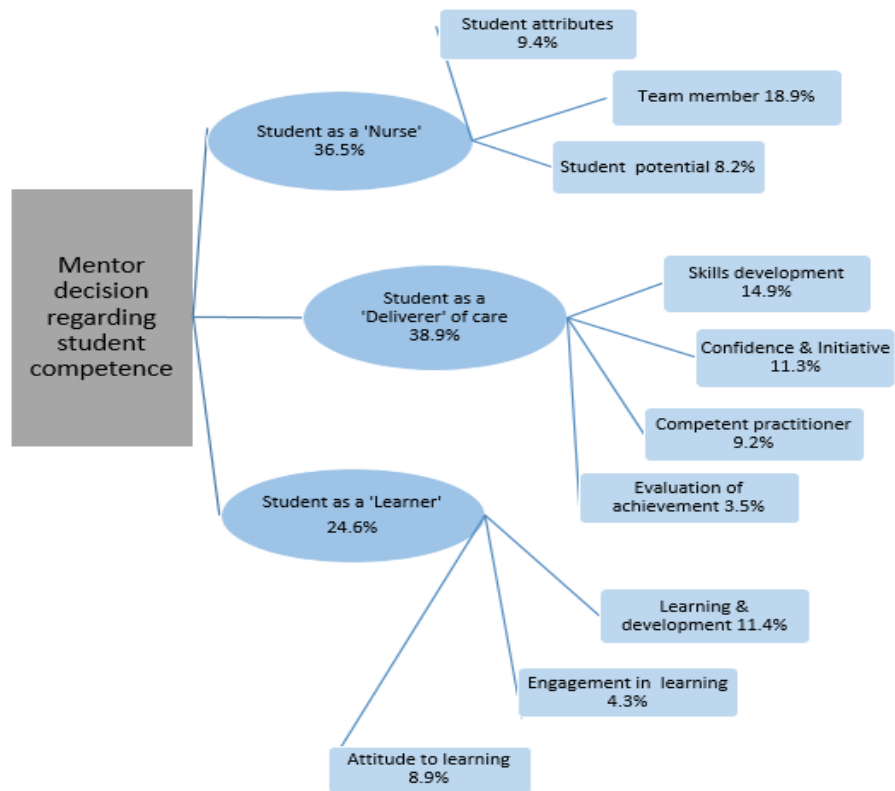


Figure 1. Final Thematic map showing Organising Themes, Themes & Frequencies for mentor comments extracted from student PADs.

**SRQ 2** What effect do assessment strategies, including documentation, have on mentor judgements and decisions about a student's practice?

Findings from the quantitative survey presented in Figures 2 & 3 illustrate that assessment strategies, programme proficiencies and documentation are shown to have a limited effect on mentor judgements and decisions. This is supported in the subsequent thematic analyses.

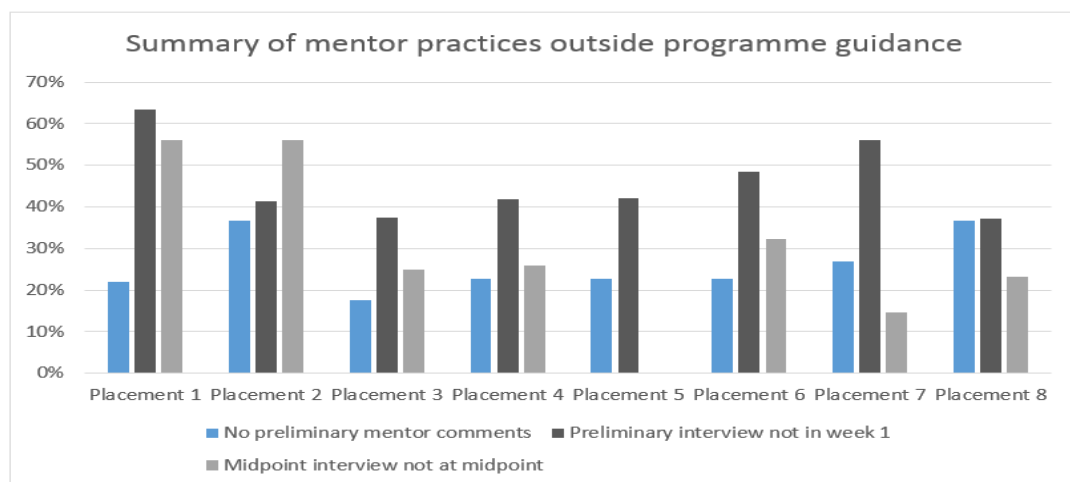


Figure 2. Summary of mentor practices across the programme.

Item of Assessment Practice at variance	All Placements	Placements recording a fail / practice concern
Late conduct of preliminary interview (after 1 <sup>st</sup> week)	50.3% conducted late	25.2% conducted late
Late conduct of midpoint interview	35.3% conducted late	22.3% conducted late
No recording of proficiencies at midpoint interview	14% no recording	25.2% no recording

Figure 3. Comparison of variance in assessment processes

What appeared to be more salient to mentors were the impressions they formed about a student and their practice, beginning early in a placement. These impressions guided mentors in the management of the assessment process, with worrying early impressions increasing the likelihood of management or compliance in line with programme guidance. Impressions therefore form the basis of ongoing judgements that build toward the summative decision made.

### SRQ3 How do mentors make judgements and reach a decision to pass or fail a student in practice?

Mentors form judgements as a result of observations of a student and their practice. Mentor judgements are social judgements about students as a result of an evaluation of information noticed and gathered around a framework of criteria, a mental map that incorporates the expectations of the mentor. Expectations reflect mentor beliefs about the current and future potential of the student and are flexible enough to accommodate a variety of practice settings and stage of student's programme. Expectations capture holistically discrete criteria and the relationships existing between them to build up a picture of overall competence to support the final decision that a student is 'safe enough to pass' and at the end of the programme is 'fit for registration'. As illustrated in figure 4, this can best be understood and conceptualised with reference to Brunswik's lens model (1952).

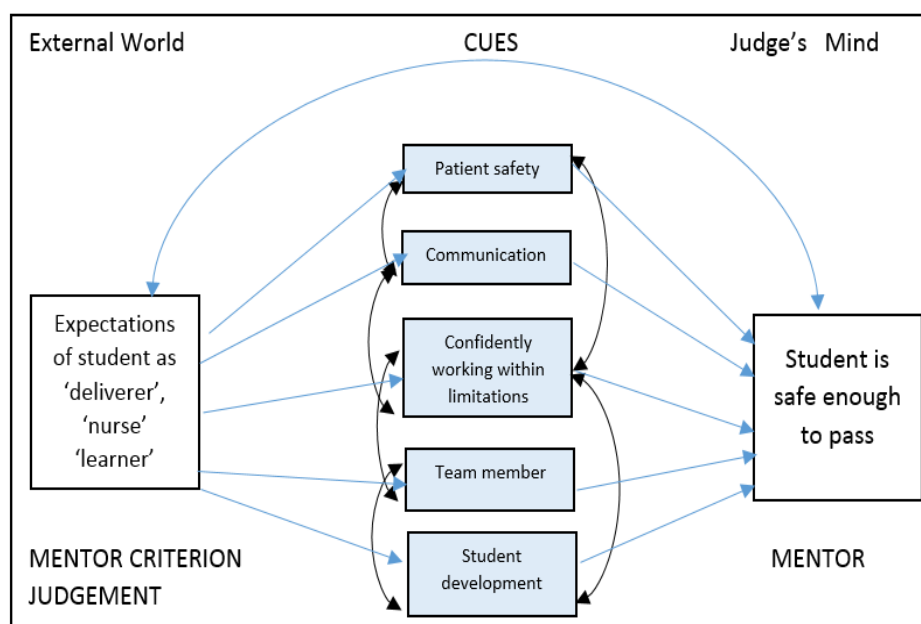


Figure 4. Schematic diagram conceptualising mentor judgements based on Brunswik's lens model (1952)

## Discussion

Findings from across all three data sets in this study revealed the limited impact that prescribed and official assessment tools, proficiencies and strategies had on mentor management of, and decision making in, student assessment. Instead decisions were impressionistic in nature, reflecting social judgements made regarding a student, rather than professional body standards. This brings into question the validity of the current competency based assessment system in use in UK undergraduate nursing education, and may perhaps challenge the basis of competency based assessment in all practice-based professions.

Despite the limited impact of professional standards, decisions taken by mentors in the study were mainly reasonable, with a degree of shared agreement in terms of cues used to inform judgements and importance of selected key criteria to support the summative decision taken. In particular a degree of confidence can be placed in those decisions made about the standard of student practice in relation to high academic achieving students. Findings from the study suggested that the way academically able students presented themselves enabled mentors to consistently judge their practice capability. Such a conclusion is supported in the wider decision making literature, suggesting that outside the arena of statistical judgements, human judgements are generally accurate or good enough, though subject to variation (Hammond 1996, Standing 2008, Kahneman 2011). Though the decisions may lack precision or at times consistency, in having a mental map to support the goal of determining whether a student should pass a placement, mentors are demonstrating a degree of reasoning which is context specific and supports action, in this case to pass or fail a student (Hammond 1996, Over 2007, Standing 2008, Hardman 2009).

This conclusion however, may not be supported where, for some decisions and some students, documented evidence was sparse in nature; perhaps indicative of a failure to put 'pen to paper' as noted by Duffy (2006), or the expectations of mentors influenced by the stage of programme or placement area. Certainly an examination of the number of text segments extracted from student documents in the study suggested that mentors overall made fewer comments regarding students who at some stage receive a fail decision in practice. In addition mentor expectations were less forensic with students in Year 1 of the programme, or those undertaking placements in some specialties e.g. Critical Care. This may have resulted in mentors either failing to challenge a "weak" student sufficiently, or according a degree of leniency to the summative decision reached. The consequence of greater expectations and scrutiny of a student in the final placement of the programme may then increase the likelihood of a student failing practice at this late stage.

Two further issues merit discussion with respect to current competence based assessment systems. Firstly by using only threshold standards of 'achieved' and 'not achieved' for any consideration of competence, what constituted the actual threshold determining a mentor's decision against the identified criteria was difficult to establish. In the study this was shown to be a particular issue for students whose academic achievements were in the mid-low range, where inconsistency in practice decisions and limited mentor feedback was most noted. Grading may allow mentors to better discriminate the threshold standard, though evidence elsewhere suggests that this remains difficult when faced with a failing student (Heaslip & Scammell 2012). Secondly, by requiring mentors to 'sign off' specified proficiencies, considered a reductionist conception of clinical practice (Gallagher et al 2012, Windsor et al 2012), mentors have to fit assessment tools to practice and the summative decision taken, rather than the assessment tools capturing the conceptualisation of practice held by mentors.

Notions of holistic competence captured in Figure 4 offer the possibility to develop a new decision making model for practice assessment. A model that may better facilitate, rather than hamper, mentor decision making as well as one that is grounded in actual mentor decision making practices, underpinned by judgement and decision making theory. Such a model incorporates an assessment of individual criteria as well as an evaluation of the whole, both of which have been shown to contribute to the decision that the student is 'safe enough to pass'. In addition processes in any newly developed assessment model would then reflect current mentor judgement and decision making, based as it is on pre-existing mentor expectations and initial and accumulating impressions. Comparisons between nursing clinical assessment with assessment in the performing arts suggests that there is scope for the development of new and creative approaches to assessing student practice (Roberts 2011). Approaches which may also promote and capture student learning, a core component of professional practice (Levett-Jones et al 2011, Ulfvarson & Oxelmark 2012). Future work on a model of student assessment based on the model of mentor decision making presented in this study has a part to play in such developments.

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